

TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No.
DC4978

In Re Application Of: LIU et al.

JAN 12 2004

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TECH CENTER 1600/2300

Serial No.
10/055,155Filing Date
01/25/2002Examiner
Jiang, Shaojia A.Group Art Unit
1617Invention: COMPOSITIONS CONTAINING SILICONE OIL-IN-WATER EMUSIONS, SALTS, ALCOHOLS,
AND SOLVENTSTO THE COMMISSIONER FOR PATENTS:

Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed on

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- ☐ A check in the amount of the fee is enclosed.
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Signature

Dated: January 8, 2004

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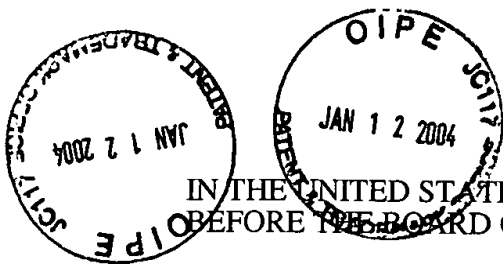
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Typed or Printed Name of Person Mailing Correspondence

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Yihan Liu & Judith M. Vincent

Serial No. 10/055,151

Filed January 25, 2002

Title Compositions Containing Silicone Oil-In-Water
Emulsions, Salts, Alcohols, and Solvents

Docket No. DC 4978

) Appeal No.

) Group Art Unit 1617

) Examiner Shaojia A. Jiang

) January 8, 2004

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APPELLANTS' BRIEF UNDER 37 CFR 1.192(a)

Commissioner for Patents
P.O. Box 1450
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Sir:

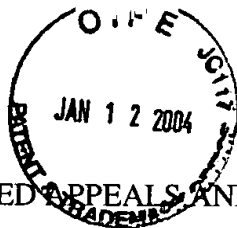
This is an appeal from the Final Rejection dated December 30, 2003, in which Claims 9, 10, and 12 were finally rejected. Appellants' claims have been twice rejected, and so the appeal is proper under 35 USC 134.

REAL PARTY IN INTEREST

The real party in interest in this application is the assignee of record of the entire interest. The assignee of record of the entire interest is Dow Corning Corporation, Midland, Michigan. The assignment was recorded on January 25, 2002, Reel 012540 Frame 0666.

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RELATED APPEALS AND INTERFERENCES

Appellants, appellants' legal representative, or the assignee of record, do not know of any related appeal or interference in any other application, which would directly affect, or be directly affected by, or have any bearing on, the Board's decision in the pending appeal.

STATUS OF CLAIMS

All of the originally filed Claims 1-8 have been cancelled, and the only claims remaining in the application are Claims 9, 10, and 12. These claims were finally rejected, and are the subject matter of this appeal.

STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection under 37 CFR 1.116.

SUMMARY OF THE INVENTION

Emulsions prepared with conventional organic surfactants are generally not stable in the presence solvents. When an ionic surfactant is used, the emulsions are not stable in the presence of salts. In fact, salts and certain organic solvents are routinely used to break emulsions into separate phases to analyze content.

However, it has been found that when a silicone polyether is used to make a silicone oil-in-water emulsion, that the oil-in-water emulsion is stable in the presence of salts, organic solvents, or combinations thereof. Such stability is an advantage and benefit in personal care, household care, automotive care, and coating industry applications.

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This invention is based on the unexpected discovery that when a silicone polyether is used to prepare a silicone oil-in-water emulsion, the resulting formulations are stable in the presence of salts such as calcium chloride and aluminum sulfate, and organic solvents such as pentane.

The process is relatively simple and involves first preparing an aqueous phase containing water, a silicone polyether surfactant, and optionally one or more organic surfactants. Then an oil phase is prepared containing a cyclic siloxane monomer which is polymerizable to a silicone oil. The oil phase is combined with the aqueous phase. A polymerization catalyst is added to the combined phases, and the combined phase is heated and agitated for a time sufficient to allow the monomer to polymerize to a silicone oil by the opening of the ring of the cyclic siloxane. A silicone oil-in-water emulsion containing the silicone oil is recovered, and it is then combined with a salt or a solvent.

ISSUES

There are four issues for consideration by The Board of Patent Appeals and Interferences. The first issue is whether Claims 9, 10, and 12, are anticipated by Kasprzak (US 5,443,760) under Section 102(b). The second issue is whether Claims 9, 10, and 12, are anticipated by Gee (US 5,891,954) under Section 102(b). The third issue is whether Claims 9, 10, and 12, are unpatentable over Kasprzak (US 5,443,760) under the judicially created doctrine of obviousness type double patenting. The fourth issue is whether Claims 9, 10, and 12, are unpatentable over Gee (US 5,891,954) under the judicially created doctrine of obviousness type double patenting.

GROUPING OF CLAIMS

The pending claims stand or fall together as a group.

ARGUMENT

Claims 9, 10, and 12 stand rejected as being anticipated by Kasprzak (US 5,443,760) and Gee (US 5,891,954) under Section 102(b), as well as being unpatentable over Kasprzak (US 5,443,760) and Gee (US 5,891,954) under the judicially created doctrine of double patenting.

The factual determination of anticipation under Section 102(b) requires the disclosure in a single reference of each and every element of the claimed invention. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 18 USPQ2d 1001 (Fed. Cir. 1991); *Diversitech Corporation v. Century Steps, Inc.*, 850 F.2d 675, 7 USPQ2d 1315 (Fed. Cir. 1988).

As pointed out in applicant's specification in Paragraphs [0005] and [0006], Kasprzak is directed to oil-in-water emulsions containing silicone polyethers, but the emulsions are mechanically prepared and not prepared by emulsion polymerization. While Gee is directed to a silicone oil-in-water emulsion prepared by emulsion polymerization, the silicone polyether in Gee is post added to the silicone oil-in-water emulsion. Gee also fails to teach the stability of such emulsions in the presence of salts and solvents.

In this regard, Claim 9 requires the step (iv) of adding a polymerization catalyst, and the step (v) of heating and agitating the combined phases for a time sufficient to allow the silicon atom containing monomer to polymerize to a silicone by the opening of the ring of a cyclic siloxane monomer. These features are absent from Kasprzak, and therefore it is not seen wherein Kasprzak can be said to anticipate the claims, nor is it seen wherein the same invention is being claimed in this present application as is being claimed in Kasprzak under the doctrine of double patenting.

With respect to Gee, the silicone polyether is post added to an already prepared silicone oil-in-water emulsion, whereas Claim 9 requires that the silicone polyether be included in the first step (i) of the process, so that according to the instant invention, the silicone polyether is present in the process before the silicone oil-in-water emulsion is even formed in subsequent step (vi). Gee also fails to describe the post addition of a salt component or an alcohol component to the silicone oil-in-water emulsion as is called for in Claim 9 in step (vi). Since these several features are absent from Gee, it is not seen wherein Gee can be said to anticipate the claims, nor is it seen wherein the same invention is being claimed in this present application as is being claimed in Gee under the doctrine of double patenting.

CONCLUSION

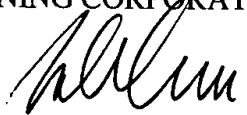
For the foregoing reasons, the Honorable Board of Appeals is requested to reverse the Examiner's rejection of Claims 9, 10, and 12.

HEARING

An oral hearing is not requested.

Respectfully submitted,

DOW CORNING CORPORATION

A handwritten signature in black ink, appearing to read "Jim L. De Cesare", written over the company name.

Jim L. De Cesare, Reg. No. 27,979, (989) 496-4235

APPENDIX

9. A method of making a silicone oil-in-water emulsion comprising (i) preparing an aqueous phase containing water, a silicone polyether surfactant, and optionally one or more organic surfactants; (ii) preparing an oil phase comprising a silicon atom containing monomer polymerizable to a silicone oil; (iii) combining the aqueous phase and the oil phase; (iv) adding a polymerization catalyst; (v) heating and agitating the combined phases for a time sufficient to allow the silicon atom containing monomer to polymerize to a silicone by the opening of the ring of a cyclic siloxane monomer; (vi) recovering a silicone oil-in-water emulsion containing the silicone oil; and (vii) combining the silicone oil-in-water emulsion with a salt component, a solvent component, or a combination thereof.

10. A method according to Claim 9 in which the component is a salt, and the salt is an inorganic salt or an organic salt selected from the group consisting of calcium chloride, magnesium sulfate, magnesium chloride, sodium sulfate, sodium thiosulfate, sodium chloride, sodium phosphate, ammonium chloride, ammonium carbonate, iron sulfate, aluminum sulfate, aluminum chloride, aluminum chlorohydrate, aluminum sesquichlorohydrate, aluminum dichlorohydrate, aluminum zirconium tetrachlorohydrate, glycine, aluminum zirconium trichlorohydrate, aluminum zirconium tetrachlorohydrate, aluminum zirconium pentachlorohydrate, aluminum zirconium octachlorohydrate, sodium aluminum lactate, sodium acetate, sodium dehydroacetate, sodium butoxy ethoxy acetate, sodium caprylate, sodium citrate, sodium lactate, sodium dihydroxy glycinate, sodium gluconate, sodium glutamate, sodium hydroxymethane sulfonate, sodium

oxalate, sodium phenate, sodium propionate, sodium saccharin, sodium salicylate, sodium sarcosinate, sodium toluene sulfonate, magnesium aspartate, calcium propionate, calcium saccharin, calcium *d*-saccharate, calcium thioglycolate, aluminum caprylate, aluminum citrate, aluminum diacetate, aluminum glycinate, aluminum lactate, aluminum methionate, aluminum phenosulfonate, potassium aspartate, potassium biphthalate, potassium bitartrate, potassium glycosulfate, potassium sorbate, potassium thioglycolate, potassium toluene sulfonate, and magnesium lactate.

12. A method according to Claim 9 in which the component is a solvent selected from the group consisting of an alkane containing less than about 16 carbon atoms, a ketone, an aromatic compound, an ester, an ether, a glycol, and a chlorinated hydrocarbon.